T Н I S P Α G E Ī S U N C L Α S

S

Ι

F

I

E-D

THIS PAGE IS UNCLASSIFIED

SECOND RETURN TO USAF Historical Archives ASI(ASHAF-A) Maxwell AFB, Ala 36112

DECLASS

REQUIRE DO NOT DESTROY

CATALOGEO

TUDY

CLASSIFIED RY

SUBJECT TO GENERAL DECLASSIFICATION SCHI DUTE OF EXECUTIVE ORDER 11652 AUTOL AT CALLY DOWNGRADED AT TWO YEAR IL 1 24 ALS DECLASSIFIED ON DECEMBER

1971

intmoter deck

VIETNA "Reproduced on 20 Ca 269 by ark &

by authority of arxf. . Reproduced

SIF ARODO #63/8/5

SEP 63

ATCH ARXDC 69-1512

THIS PAGE IS UNCLASSIFIED

Final digular ters
SECOND AIR DIVISION
Thirteenth Air Force
United States Air Force
AFO 143, San Francisco, California

REPLY TO ATTN OF:2CCR

7 Nov 1963

SUBJECT: Requirement for Professional Rescue Forces in Republic of Viet Nam

TO: 13AF, AFO 74, US Forces FACAF, APO 953, US Forces IN TURN

- 1. In response to the request in massage PFARS-OP-152K, dated 2 Oct 1963, the attached study concerning rescue capabilities in RVN is forwarded. It has not been coordinated with MACV.
- 2. This study outlines deficiencies in rescue function in Republic of Viet Nam and emphasize of larged for professional rescue capability. It is believed to be the first time that the combined effort of all military forces have been presented from the viewpoint of required rescue support. Professional rescue forces are currently nonexistent in this theater; however, the requirement presently exists and increases daily as the tempo of the countering any effort gains momentum.
- 3 Recommended within this study is the establishment of a professional resome force that well be the nucleus of the entire rescue effort. These recommendations are considered realistic and the minimum required to support the mission in the Republic of Viet Nam.
- 4. It is recommended that the study be adopted and that coordination be accomplished as a research the FACAF/CINCHAC level to minimize delay in correcting the resisting deficiencies therein.

ROLLEN H. ANUHIS Major General, USAF Commander

1 Atch

"Study" - Requirement for Frofessional Rescue Forces in the Republic of Viet Nam

ARODC # 63/8/5

HQ ARS SC NO. 632534

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

SECOND AIR DIVISION SAR REQUIREMENT STUDY POR

REPUBLIC OF VIETNAM

This study is classified SECRET because it discloses operational capabilities and losses to enemy actions in the Republic of Vietnam.

This stary should be immurader at three year intervals and declassified after 15 years. Dec.1 \times 0% 27.

DISTRIBUTION:

Zan Air Jesto de
Lino Air Porto de Sectore

PACAP

Fronto de Air Porto de Sectore

1



Thirteenth Air Force
APO 143, San Francisco, California

SUBJECT: Requirement for Professional Rescue Forces in the Republic of Vietnem

REFERENCES:

- a. PACAF Regulation 55-90, Search and Rescue.
- b. CIMCPAC Instruction 3130.1B, Search and Rescue in the Pacific Greenend.
- e. Headquarters 2nd Air Division Regulation 55-20, Search and Rescue Operations.
 - d. Joint US/Vietnamese Search and Rescue Agreement.

1. PURIFOSE:

- a. To analyze the combined US/Vietnamese counterinsurgency effort in South Vietnam with regard to rescue requirements.
- b. Recommend a rescue force to provide equipment and professional rescue personnel to conduct and assist in all rescue functions.

2. DISCUSSION:

a. General: The mission of the combined forces of the United
States and the Republic of Vietnam dictate extensive air/ground operations over mountainous and jungle terrain that for the most part is inaccessible except by air. Recovery of distressed personnel via airborne
methods is necessary in all areas of South Vietnam, including the delta
or lowland areas. This method of recovery is necessitated by the
absence of adequate road or waterway systems.

T F١ Α G E Ì S U Ν C L Α S S Ι F Ι E D

THIS PAGE IS UNCLASSIFIED

b. Area of Responsibility:

- (1) PACAF Regulation 55-90, dated 28 January 1963, "Search and Rescue", establishes the requirement for search and rescue for CINCPACAF.
 CINCPAG Instruction 3130.1B, dated 10 June 1963, "SEARCH AND HESCUE IN
 THE PACIFIC COMMAND", establishes broad areas of responsibility. Headquarters 2nd Air Division Regulation 55-20, dated 28 May 1963, "SEARCH
 AND RESCUE OPERATIONS", designates search and rescue responsibility within Thailand and Vietnam. The JOINT VIETNAMESE/US SEARCH AND RESCUE AGREE—
 MENT, dated 15 November 1962, further establishes the policies for mutual
 rescue procedures and control of the Search and Rescue effort within the
 Republic of Vietnam.
- (2) The general area of responsibility for this SARCC encompasses Cambodia, Laos, Thailand and Vietnam. Existing conditions preclude basing rescue aircraft within Cambodia and Laos, and conducting search and rescue operations in these countries; therefore, all rescue aircraft must be based in Thailand and Vietnam. The responsibility exists for rescue operations in Thailand; however, due to the limited operation of US Forces in that country the Thailand Air Force possesses sufficient aircraft to fulfill this rescue requirement on a normal SAR basis. In view of this fact our role in Thailand is normally relegated to one of "monitor and assist".
- (3) The current primary area of responsibility is within the Republic of Vietnam due to the extensive operation of US Forces in this country. The "JOINT VIETNAMESE/US SEARCH AND RESCUE AGREEMENT" further sets forth the responsibility of the SARCG within the Air Operations Center, Headquarters 2nd Air Division, for providing

search and rescue coverage for all US Forces within the Republic of Victors.

e. Risk Environment:

- (1) The intensive flying effort within Vistnam is conducted in an area of combat operations and unfavorable weather conditions. The average monthly sortic rate from 1 January 1963 through 31 July 1963 was 25,762.

 (See Tab A). A constant growth in the sortic rate has been experienced during the past seven (7) months, and during the peak month of July a total of 29,546 sortics were flown.
- (2) The type aircraft involved in these serties renge from jet, to light observation aircraft and include transport, fighter, reconnaissence and helicopter. This factor increases the risk due to the maintenance and logistics problems associated with operating a combination of aircraft in a remote area.

d. Loss Rate: (See Tab B)

- (1) The steadily increasing requirement for close air/ground support results in higher exposure time for aircraft to enemy fire. The bulk of the sortice are conducted during daylight hours; however, strike aircraft also complete their mission during the hours of darkness in defense of the strategic hamlet complex in Vietnam. As the number of hamlets increase, the night sortic rate increases because the Vist Geng attack these areas primarily under the cover of darkness.
- (2) Constant high temperature, coupled with thunderstorms and associated adverse flying conditions, further compromises the safety of airborne operations. (See Tab C).

e. Passenger Flort (See Tab D).

(1) Several factors effect the relatively heavy flow of

military and civilian personnel through, and within the Republic of Vietnam.

- (a) The rotation of approximately 14,000 military personnel on a yearly basis presents a fixed transportation requirement.
- (b) Transportation of a portion of these personnel to and from their duty station in Vietnam is also a relatively fixed reouirement.
- (e) Additional personnel movement is distated largely by the current combat situation. This affects US/Vietnamese military and civilians assigned to assist in a variety of positions.
- (d) The "in country" movement of personnel exposes them to hostile actions for a longer period than the "in/out country" flights; however, all flights conducted in and over the Republic of Vistness are exposed to ensure ground three.

f. Aircraft:

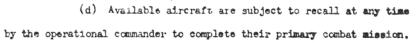
- (1) Currently there are no Air Rescue Service aircraft assigned to Vietnam. In addition, none of the assigned aircraft in the joint services are designated solely for rescue operations. This fact has the following adverse affects during all rescue operations:
- (a) Rescue aircraft are not immediately available for rescue missions.
- (b) Available aircraft are not equipped for rescue missions; to wit, hoist, medical gear, slings, etc.
- (c) Available aircraft do not have a hoist cable long enough to effect a pickup in jungle areas where tree heights often exceed 200 feet.

(4)

Н

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED



g. Personnel:

- rescue training other than basic procedures taught to all aircrews. Their knowledge of pickup procedures, aerial delivery and search patterns, coordination requirements and search control is nil. Moreover, no personnel are assigned who are trained to parachute into mountainous and jungle terrain to assist survivors and provide medical aid. Since Viet Cong controlled areas are predominantly in this terrain, the requirement for rapid response and recovery is paramount in the mountainous/jungle sections of the Republic of Vietnam. Under existing conditions recovery has taken as long as four (4) days after the downed aircraft was located due to the inability to deliver rescue personnel to the distressed area.
- (2) The assigned pilot and medical personnel could be trained in rescue procedures; however, the highly specialized training requirements of pararescue personnel prohibits "in the field" training of these men.
- h. <u>Support</u>: Assigned personnel and equipment currently have support from their parent units. A requirement does exist for specially designed rescue kits for aircraft and ground personnel. (See Tab E). Support activity does not exist for any specific rescue function; however, the necessary equipment, with the exception of specialized rescue items, is available from operational units.

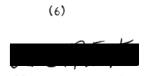


3. CONCLUSIONS:

- a. The facts presented indicate an urgent need exists for professional men and equipment, specially trained and designed for one mission - RESCUE. The combat sorties, high density traffic, extensive airlift of personnel and adverse weather, combine to establish a high risk environment demanding professional rescue coverage.
- b. The establishment of a professional rescue force at strategically located fields in the Republic of Vietnam, capable of repid recovery of personnel and equipment, would have the following immediate results:
- (1) Provide a capability to prevent extensive and unwarrented loss of human life.
- (2) Higher morale among air and ground personnel due to the knowledge that adequate equipment, manned by professional crews, is on alert 24 hours a day to execute rescue operations in all areas the Republic of Vietnam.
- (3) Preclude the frequent diverting of aircraft from tactical missions to conduct rescue functions.
- (4) Reduce, and possibly eliminate, a source of supply of arms and ammunition to the Viet Cong forces operating in the Republic of Vietnam. This would be a bonus dividend resulting from the recovery of munitions and equipment from a crash site before opposition forces could salvage these materials that are vital to guerilla operation.

4. RECOMMENDATIONS:

a. It is recommended that rescue forces be assigned at the



F

I E

D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED



following existing bases in the Republic of Vietnam; Bien Hoa, Can Tho,
Da Nang and Pleiku. The maximum distance between these locations is
185 nautical miles, and the mirroum distance is 100 nautical miles.
(See Tab F). The location of these bases allow for a reasonable reaction time to any site within the area of responsibility; in addition, these bases provide two items of primary consideration:

- (1) The necessary support is available, including an airstrip suitable for evacuation aircraft, if injuries are beyond the capability of the base medical facility.
- (2) Forces are available to secure the rescue facilities from hostile action while on alert at the home base.

b. It is recomme that two aircraft be based at each base.

Two aircraft at each site will insure continuous rescue coverage, allow for air and ground crew training, and provide aircraft to supplement areas of accelerated rescue requirements, (increased combat operations), while maintaining a rescue cap bility for the entire area.

It should be pointed out that this should not be confused with an LPR unit. Although the helicopters could function as LER units, their primary mission would be area SAR coverage and operational control of these units should be vested in 2nd Air Division ACC/SARCC.

- (1) It is recommended that the Air Rescue Service HH-43 helicopter be initially assigned this mission pending receipt of helicopters into Air Rescue inventory with the following characteristics in addition to those possessed by the HH-43:
- (a) Longer Range. When conducting a rescue operation in this area, many times the helicopter must remain airborne until the area

THIS PAGE IS UNCLASSIFIED

is secure or hover for extended periods during a jungle operation. If the rescue site is located on the outer perimeter of a units area of control (i. e., area along 17th parallel for the Da Nang unit, see Tab F), the range of the HH-43 would be insufficient under the above conditions.

- (b) Less Vulnerable to Enemy Action. Enemy fire takes a heavy toll of helicopters in the RVN. During a recent four month period, eight helicopters were shot down by ground fire of which five were UH-1B's, one H-34 and two H-21's.
- (2) The HH-43 aircraft possesses the capability to successfully conduct most rescue operations in the area of responsibility, whereas conventionally powered helicopters cannot complete missions because of insufficient performance. This point was forcefully brought home on 9 March 1963, on a rescue mission of a Mohawk crew at the 6000 foot level in mountainous jungle terrain. A Marine H-34, while attempting to lower communications to the crash site, crashed and burned due to lack of sufficient power. Adequate equipment was not available to retrieve the injured crew and the pilot and VNAF observer died during the night. The following day another H-34 was lost on the same mission injuring two crew members. The US Officer and VNAF Observer could have possibly been saved if adequate rescue equipment and trained personnel had been available.
- (a) The current lack of jet fuel at three of the four recommended bases is a legistics problem that can be resolved locally.
- c. It is recommended that six pilot and six paramedics be assigned to each selected base to provide for maximum effort missions, training and crew rest requirements. It is further recommended that six crew

THIS PAGE IS UNCLASSIFIED

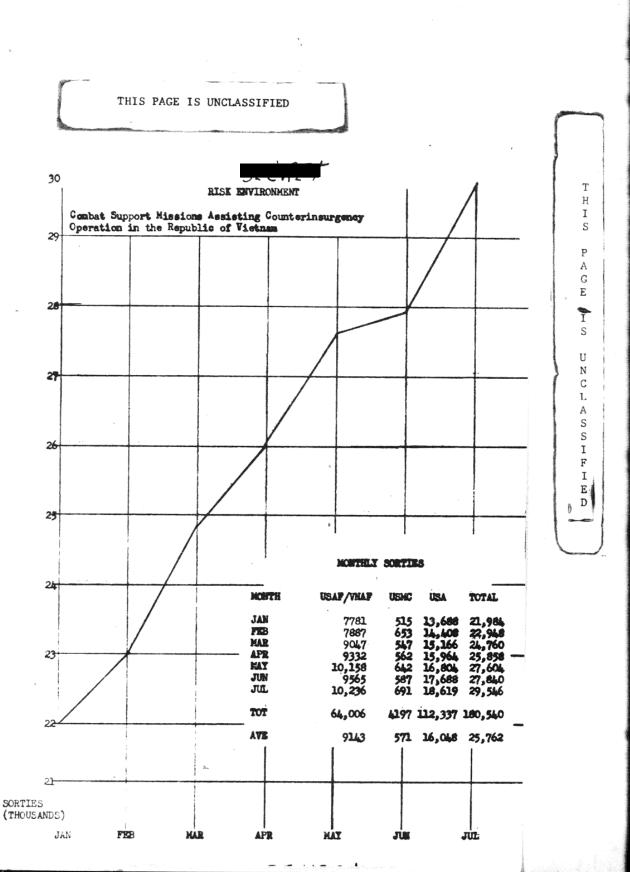


chiefs be assigned to each base to provide for alert and rescue commitments, aircraft inspections and crew rest. (See Tab G).

- d. It is recommended that the alert crew be composed of following crew members; two pilots, two pararescue and one crew chief. Because of the combat conditions, lack of navigational facilities, terrain and marginal weather in Vietnam the requirement for two pilots is apparent. The pararescue crew members will operate as a team, and provide on the spot medical assistance for survivors. The crew chief will act as hoist operator, and in case of mechanical malfunction his presence and knowledge will be invaluable.
- e. It is recommended that the helicopters assigned to this mission be equipped with a hoist with a minimum of two hundred and fifty feet of cable. This one item of special equipment will allow personnel pickups to be completed in jungle area without deployment of ground parties in at least thirty percent of the anticipated missions.

 5. SUMMARY: The risk environment, passenger flow and loss rate, (Tab A, B, D), each in itself justifies professional rescue forces, and taken in total these factors stress the urgency for these forces. The proficiency level of assigned personnel must be high because the combined adverse weather, terrain and combat conditions demand that air and ground crews be the best available. The steady growth in air support missions emphasizes the requirement for Professional Rescue Forces in the Republic of Vietnam.

THIS PAGE IS UNCLASSIFIED



THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

RECOMMENDED MANNING OF RESCUE UNIT

The proposed manning of each unit is indicated below:

	17.12			
PUNCTION TITLE	GRADE	AFSC	MUNICIPA	
Pilot, Helicopter	Captain	1025	3	
Pilot, Helicopter	1/14	1025	3	
Rescue Survival Tech	MSgt	B92170	3	
Rescue Survival Speci	SSgt	B92130	3	
Acft Maint Superintendent	SMSgt	43190	1	
Helicopter Tech	TSgt	443170	1	
Helicopter Mech	SSgt	A43150	4	

TAB G

RESCUE KIT:

QTY ITEM Pyrotechnic gun with six flares. Day/night distress flares. 1 * 6 * 2 * Blankets. 1 * URC-11 radio. 1 * Battle dressing kit, including airway pharyngeal and morphine. 2 * 2 * 1 * Machete. Quarts plasma or glucose.

Crash entry kit:

2 Shovel, D handle. Crash axe. Pry bar, long. 1 Pry bar, short.
2pr Gloves, heavy work.
Inter aircraft signal light (Aldis Lamp).
Canvas folding or stokes litter.
Sling hoist, (horse collar). 1 Hoist operators safety harness. Rope, 200'. 1 6 Message drop container. Gallons water in 1 pint cans.

(*) Items stored in back packs to be lowered or carried as a kit.

OPTIONAL EQUIPMENT IN STANDBY KIT:

Rescue basket.

Portable battery powered light.
Gasoline powered chain saw, 24".
Body bag.
PRC-10 radio.

T Н S p Α G E Ì S U N С L А S S F Ι E D

CLIMATOLOGY STUDY-KEPUBLIC OF VIETNAM:

The following data was extracted from the records of the Republic of Vietnam Directorate of Meteorology. Information was gathered at seventeen (17) main weather stations in their area of control

The following data is yearly averages given in the number of days that the weather phenomenon indicated can be expected at all sites:

TYPE	DAYS
FOG	13
THUNDERSTORM	62
RAIN	142

The daily average high temperature for the year is eighty-five (85) degrees Fahrenheit.

THIS PAGE IS UNCLASSIFIED



MATS AND MATS CIVILIAN CONTRACT FLIGHTS IN/OUT TAN SON NHUT AB, SAIGON

MONTH	MATS MILITARY	CIVILIAN CONTRACT	TOTAL MATS MIL & CIV	Passengers
JAN	164	82	246	4,443
FEB	137	83	220	4,454
MAR	138	82	220	5,631
APR	123	89	212	5,439
MAY	109	113	222	5,929
JUN	106	81	187	5,517
JUL	137	82	219	5,866
AUG	_93	78	171	5.00%
TOT	1007	690	1,697	42,283
MONTHLY AVERAGE	126	86	212	5,285

AVERAGE PASSENGERS PER PASSENGER AIRCRAFT: 155.

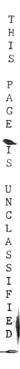
AVERAGE NUMBER passengers airlifted within the Republic of Vietnam wis C-123 aircraft:

MONTHLY - 8,000; ANNUAL 96,000.

Combined C-123, MATS, and MATS Contract:

TYPE	MONTHLY	ANN
C-123	8,000	96,000
MATS & CONTRACT	5.325	63.900
TOTAL	13,325	159,900

TAB D



LOSS RATE: The number of aircraft known to have been forced down in the Republic of Vietnam due to battle damage and mechanical malfunction for the period 1 January through 31 August 1963 is indicated below. Many of the aircraft were shot down by ground fire. Aircraft that made controlled forced landings, and those that crash landed are shown in separate columns. Fersonnel killed in action (KIA), and wounded in action (WIA) are also shown. The KIA and WIA totals are considered to be extremely conservative for the period covered. This is caused by the difficulty in obtaining exact data from each of the joint services, due to incomplete records being available. The total number of downed aircraft are also considered conservative for the same reason.

COMMAND	DOWNED	CRASHED	FORCED LAND	KIA	AIW
USAF	9	9	0	7	0
USA	58	32	26	20	36
USMC	6	2	Li _e	ı	4
VNAF	8	7	1	2	14
CTHER	2	_2_	0	N/A	N/A
TOTAL	83	52	31	30	54

TAB B 2d ADIV SAR STUDY HIS PAGE IS UNCLASSIFIED

T

THIS PAGE IS UNCLASSIFIED

RECOMMENDED MANNING OF RESCUE UNIT

The proposed manning of each unit is indicated belows

PUNCTION TITLE	GRADE	AFSC	
Pilot, Helicopter	Captain	1025\$	3
Pilot, Helicopter	1/14	10251	3
Rescue Survival Tech	MSgt	B92170	3
Rescue Survival Speci	SSgt	B92130	3
Acrt Maint Superintendent	SMSgt	43190	1
Helicopter Tech	TSgt	443170	1
Helicopter Mech	SSgt	A43150	4

TAB G